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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,495	09/24/2001	Hiroyuki Amishiro	50090-338	5812

7590 04/05/2002

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EXAMINER

SUTTON, TIMOTHY J

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 04/05/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,495

Applicant(s)

AMISHIRO ET AL.

Examiner

Timothy J Sutton

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9-11 & 13 is/are rejected.
- 7) ☒ Claim(s) 4-8 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

Figures 13a, 13b, 13c, and 14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the resistor elements that are surrounded by the active regions must be shown or the feature(s) canceled from the claim(s). Examiner notes that in figure 2A, the resistor (4) is completely surrounded by the isolation area (2). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The disclosure is objected to because of the following informalities: Examiner notes that the word "**contiguous**" is defined as touching or connected throughout in an unbroken sequence; or being in actual contact, touching along a boundary, or at a point.

In the figures it is clearly shown that the resistors are not contiguous with the active regions. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 1, while applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The accepted meaning is for the term "**contiguous**" is the touching and/or connecting throughout an unbroken sequence or being in actual contact touching along a boundary or at a point.

The term "minimum" in claim 10 is a relative term, which renders the claim indefinite. The term "minimum" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Examiner notes that it is unclear to what the applicant is claiming.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1, 2, 4, 9, 11, & 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Babcock et al. (U.S. P.G. Publication 2002/0033519).

Re claim 1, Babcock et al. discloses a semiconductor device having a plurality of resistor elements (figure 2c, items 60 & 70) formed on an insulating film in predetermined regions on a surface of a semiconductor substrate (figure 2c, items 10 & 20), said semiconductor device comprising active regions contiguous with said resistor elements (active regions are located to the left and to the right of the STI).

Re claim 2, the insulating film is an element isolating film formed by shallow trench isolation (paragraph 0017).

Re claim 4, the plurality of resistor elements are arranged on said insulating film and the insulating film is located under the resistor elements (figure 2c, items 20, 60, & 70).

Re claim 9, a plurality of resistor elements is furnished between any adjacent two of the active regions (figure 2c, items 60 & 70, the active regions are located to the left and the right of the shallow trench region).

Re claim 10, the distance between any adjacent two of the plurality of resistor elements is set to a minimum space (figure 2c, items 60 & 70 are set to a minimum space between each other) between patterns formed by conductive film constituting the

same layer as that of said resistor elements on said semiconductor substrate (paragraph 0018).

Re claim 11, the active regions extend close to lengthwise ends of the resistor elements, which are surrounded by the active regions (figure 2c-the active regions that are located to the left and to the right of the resistors extend **close** to the resistor elements that are surrounded by the active region).

Re claim 13, the resistor elements are formed by a layer-constituting gate electrodes of MOS transistors furnished outside said predetermined regions (figure 2c, items 80, 70, & 60).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Babcock et al. in view of Wolf (Silicon Processing for the VLSI Era, Volume 2-Process Integration).

As stated in paragraph 4, all of the limitations have been taught except for the teaching of the insulating film under said resistor elements is set to a predetermined width by said active regions.

Wolf teaches the formation of two active regions with a shallow trench region. The width of the insulating region is predetermined by the amount of space between the two active regions (see figures 2-32 & 2-33).

It would be obvious to one with ordinary skill in the art that a predetermined width of the isolating region is defined by the distance between the two active regions as taught by Wolf.

Allowable Subject Matter

Claims 4-8 & 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Re claim 4, the prior art does not teach or fairly suggest a predetermined isolation width that is defined by an amount of shift in the resistance value of resistor elements, the amount of the shift being defined by the predetermined width. Re claim 5-8 & 12, the prior art does not teach or fairly suggest that the regions including the active regions are furnished with dummy gate electrodes constituting the same layer as that of the resistor elements.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Sutton whose telephone number is 703-305-0070. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers

Application/Control Number: 09/960,495

Page 7

Art Unit: 2813

for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

tjs
April 2, 2002


ERIK KIELIN